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1. Hong Kong Turns to New Markets
2. Chesapeake Bridge Eases East-Coast Traffic
3. Alaskan Lake Stages Unique Performance
4. Windmills Take up a New Career
5. Beirut Called Heir of Tyre and Sidon

(SEE BULLETIN NO. 1)

J. CHARLES THOMPSON

CHINESE FISHING JUNKS SPREAD RIBBED STRAW SAILS TO THE BREEZE AS THEY GLIDE THROUGH ABERDEEN CHANNEL FROM HONG KONG TO THE OPEN SEA

Bulletin No. 1, October 20, 1952

Hong Kong Turns to New Markets

WITH Hong Kong virtually isolated from south China by American, United Nations, and Chinese communist embargoes, that British Crown Colony is finding new markets in southeast Asia and adjacent regions.

For a century, Hong Kong has been the West's trade gateway to south China. Recent reports, however, show that the colony's trade with China is now limited to vegetables, poultry, pigs, and other food items. Hong Kong merchants, adapting themselves to changed conditions, are shipping goods in increasing quantities to Thailand, Indonesia, Malaya, Australia, rehabilitated Japan, and Chiang Kai-shek's Formosa.

Has No Heavy Industry

Hong Kong is a 391-square-mile island off the China coast at the mouth of the Pearl River. Except for the short Japanese occupation during World War II, Britain has governed Hong Kong since the Chinese ceded it in 1841. The Kowloon peninsula on the mainland opposite Hong Kong was made part of the Crown Colony by treaty in 1860. In 1898 the New Territories, also on the mainland, were leased for 99 years.

Almost impossible to defend against a strong foe, and lacking heavy industry or adequate agriculture, Hong Kong exists for and by virtue of acres of *godowns*, or warehouses, through which goods in transit pass without being subject to customs duties. Hong Kong is a free port except for the importation of certain commodities such as tobacco, alcoholic liquors, and cosmetics.

An estimated three-fourths of Hong Kong's 2,500,000 people are refugees, a great many of them Chinese from the mainland. This means that the Crown Colony has more refugees per square mile than any other area on the face of the earth.

Shanghai merchants seeking passage to Brazil rub shoulders with nationalist generals hoping Chiang Kai-shek will again seek their services. Coolies, followers of Chiang in the Civil War, mix with anti-communist crews of fishing junks (illustration, cover) exiled from home ports.

British and Chinese Proved East and West Could Meet

With little available farmland in the vicinity, fish from the surrounding waters (illustration, next page) answer the pressing question of how to feed Hong Kong's residents—a problem even in normal times.

British power and prestige have thus far assured law and order in peace times and in most periods of stress. Abacuses click and adding machines clatter side by side in the countinghouses of great business firms whose British and Chinese officials daily prove that East can meet West in peaceful business relations.

Japanese conquest in December, 1941, brought a depression, followed by a postwar boom, mainly because of trade with China. Rich cargoes passing in and out of Hong Kong—including smuggled goods—attracted pirates of notorious Bias Bay, 40 miles northeast, who equipped their

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U. S. AIR FORCE, OFFICIAL

KNIK GLACIER, IN THE NARROW VALLEY, MOVES SLOWLY TO THE RIGHT AND KEEPS ICE-COVERED LAKE GEORGE PLUGGED MOST OF THE YEAR

Forty-five miles from Anchorage, Alaska, nature presents a spectacle every July and August when the thaw raises the level of the lake seen dimly at the right. Its waters tumble over the glacial stopper and soon cut a roaring channel through it. Then, with winter, the glacier closes the outlet valve again (Bulletin No. 3).

Chesapeake Bridge Eases East-Coast Traffic

ON a sweltering day last July traffic rolled across the spectacular Chesapeake Bay Bridge for the first time, and Maryland's long-separated "shores" were joined.

An estimated 20,000 persons watched the governor of Maryland and his predecessor in office cut the ribbons at the western approach to the bridge before leading a motor caravan across the new span to repeat the ceremony at the eastern end.

Shortens Route to South

This $45,000,000 highway spans a narrow reach of the Chesapeake between Sandy Point, north across the Severn River from Annapolis, and sprawling Kent Island (illustration, next page). It connects the main part of Maryland with the section known in the Old Line State as the Eastern Shore. Although Kent is actually an island, the channel dividing it from the mainland is so small as to be almost unnoticeable.

The drive from shore to shore of six or seven minutes not only speeds local travel, but provides an all-rural shortcut to Florida for New York motorists. Ever since the days of Captain John Smith, the Chesapeake has been a concourse for coastwise and ocean-going traffic. But for land-lubbers driving along the Atlantic coast north and south, the salty inlet had meant either an inland detour or a long slow ferry hop.

The Eastern Shore is part of Delmarva, a quiet peninsula which Maryland shares with Delaware and Virginia. Delmarvans live off the beaten track. From the peninsula's rich farms and truck gardens, oyster beds and fish wharves, tons of food go each day to markets of the "foreigners" who live in Philadelphia, New York, Baltimore, and Washington.

The new bay bridge brings an end to isolation. It has been estimated that 1,100,000 cars and trucks will cross the bridge in its first year of operation, avoiding city congestion on the north-south route.

Nearly Four Years in Building

Kent Island was once the scene of a "war" between the colonies of Maryland and Virginia. William Claiborne, a Virginian, established on the island what he called a "barony" around the first Indian trading post on the Chesapeake. He and his "Kentish men" fought to keep Lord Calvert's colonists from claiming the island for Maryland.

The bridge, which was three years and seven months in building, is made up of four different types of spans. The high section across the main channel is a suspension bridge. Two towers 355 feet high support this 1,600-foot section. The largest ocean-going ships can pass under the highway which is 186 feet above the water at this point. Other sections are "deck cantilever," "through cantilever," and "truss span."

Including its approaches, construction for the new skyway sprawls 7.7 miles. Despite its shore-line-to-shore-line length of 22,990 feet (4.35 miles) the bridge is not the longest over-water structure ever built. It is far surpassed by the famous Lucin Cutoff of the Southern Pacific Railroad

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junks with cannon and armorplate salvaged from the debris left by the Japanese.

Intrigue is rife in Hong Kong. The British tread warily, permitting freedom of speech and press to all sides and impartially arresting anyone who seeks to break the peace. British eagerness to avoid trouble has been matched so far by the communists on the other side of the border beyond Kowloon.

Worried by the nearness of the unpredictable communists, some Hong Kong firms are reported as planning to move to Africa and Japan. But most of the colony's business men hope for an end to the Korean conflict and resumption of the China trade. Meanwhile, the British drill defense forces against a half-expected blow from the mainland.

NOTE: Hong Kong may be located on the National Geographic Society's map of China. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

See also, "Trawling the China Seas," in *The National Geographic Magazine* for March, 1950; "Hong Kong Restored" (9 photographs), April, 1947; "Today on the China Coast," February, 1945; "1940 Paradox in Hong Kong," April, 1940; and "Hong Kong—Britain's Far-flung Outpost in China," March, 1938. *(Back issues of the Magazine may be obtained from the Society's headquarters at 60¢ a copy, 1946 to date; $1.00, 1930-1945; $2.00, 1913-1929. Earlier issues at varied prices.)*

J. CHARLES THOMPSON

"FISH FIELDS" ON ABERDEEN ISLAND SUPPLY THE DINNER TABLES OF HONG KONG

As little food is grown on Hong Kong's rugged terrain, the Crown Colony lives chiefly on fish. Caught by fan-sailed junks trawling the surrounding waters, fish are spread on strips of matting to dry in the sun on Aberdeen Island. This small island, known to the Chinese as Aplichau, lies off the southern coast of Hong Kong.

Bulletin No. 3, October 20, 1952

Alaskan Lake Stages Unique Performance

IN THE rugged ice-glazed ranges of Alaska, where the ice age still persists, nature performs many strange tricks. One of the oddest of these exceptional performances is that of Lake George, 45 miles east of Anchorage, Alaska's largest city.

Each July this sprawling lake on the south slopes of the Chugach Mountains automatically dumps billions of gallons of water into the Knik River. During the winter melted snow, rain, and seepage from the Knik Glacier collect in the lake and fill it literally to overflowing.

Reaches Pacific Through Cook Inlet

When spring thaws melt this accumulation, the rush of the excess water is of sufficient force to cut a channel seven and half miles long through the glacier which is 250 feet deep.

Gushing down the river into Knik Arm, past Anchorage, the vast flood eventually reaches the Pacific Ocean through Cook Inlet of the Gulf of Alaska.

As Knik Glacier (illustration, inside cover) moves slowly down toward the Knik River, it jams against the rocky wall of the Chugach Mountains. Ten months of the year the glacier holds back the rising lake, an irregular depression 15 miles long and five miles wide. When the lake is brimful in late June, it is more than 200 feet deep.

Early in July Lake George sends its first trickle of overflow across the softening ice barricade. The heat of Alaska's short summer helps the stream to gouge a channel where the glacier meets the mountain wall. In two weeks or less the brimming lake is transformed into a mudhole in which huge icebergs, broken from the glacier, are trapped, while the flood waters race down the Knik River to Cook Inlet.

The level of Lake George drops a foot an hour as the rushing water gashes its way to the bottom of the glacier's 250-foot depth. When winter comes again, the creeping glacier once more stops up the gap and the lake begins to refill. How long the cycle has gone on, no one knows.

Rivals Yellowstone Geysers and Niagara

Although it is close to the sizable city of Anchorage, whose population numbers more than 11,000 people, and to the ocean-steamer traffic down Cook Inlet, Lake George is so far unapproached by highway. The Chugach Range bars the way with its 7,000-foot peaks.

The few travelers who have seen this remarkable lake consider it a natural wonder almost equal in interest to Niagara Falls and the geysers of Yellowstone National Park.

It is almost impossible to reach Lake George except by a small plane which now transports the few visitors hardy enough to seek its shores. But Alaskans believe that eventually the lake will attract thousands of vacationists with its unique performance.

According to scientists, glaciers are retreating, not only in Alaska, but all over the world. In areas of Alaska, rock-strewn valleys today lie

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over Utah's Great Salt Lake. Completed 50 years ago, with rock-filled causeways and 12 miles of wooden trestle, the cutoff is 30 miles long.

Florida's Overseas Highway to Key West ranks as one of the longest ocean-going roads in the world. One link, the Long Bridge, jumps seven miles of open water. The Thousand Islands International Bridge between New York State and Ontario Province, Canada, leapfrogs from island to island for eight and a half miles. The San Francisco-Oakland Bay Bridge extends eight miles, including a tunnel in the middle through an island.

NOTE: The site of the new Chesapeake Bay Bridge may be located on the Society's map of the Northeastern United States.

For further information about the region, see "'Delmarva,' Gift of the Sea," in *The National Geographic Magazine* for September, 1950; "Maryland Presents—", April, 1941; "Chesapeake Odyssey," September, 1939; "Roads from Washington," July, 1938; and "Diamond Delaware, Colonial Still," September, 1935.

H. ROBINS HOLLYDAY

CHESAPEAKE ISLAND CROPS FEED THE CITIES THE NEW BAY BRIDGE BY-PASSES

Outlying fringe of Maryland's Eastern Shore, small fertile islands are scattered like pieces of a picture puzzle in the waters of Chesapeake Bay. Market gardens mark them like patchwork quilts. Beyond Wye (center) lies Kent Island, steppingstone on which the new bridge rests its eastern foot.

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Windmills Take up a New Career

DON QUIXOTE, who tilted at windmills in Cervantes' 17th-century novel, would get a shock if he tried to go into action against the mid-20th-century type.

The graceful circling arms of the Spanish hero's adversary bear little resemblance to the flashing steel blades of the modern windmill. The windmill of today is a towering network of steel designed for use in man's newest effort to generate electricity by wind power.

Much Less Expensive than Coal

The 20th-century version of the windmill has been erected on Costa Head in the stormy Orkney Islands off northern Scotland. A study of the winds off this point of the Mainland isle of the group indicates a supply of potential energy that may equal the area's hydroelectric resources.

Work is also under way on a modern windmill for northwest Wales. If these steel structures prove successful in furnishing power, engineers see in the future a new source only half as costly as that generated by plants which consume coal.

It will mean, too, a fresh career for the ancient windmill that began its service to man some time before the 12th century and has worked faithfully through the years grinding his corn and sugar cane (illustration, next page), irrigating his fields, and pumping his water.

History does not mention the invention of windmills, but they first became common in Germany and the Netherlands. By the 15th century, the "pumping mills"—used for draining land—were a necessity to the Dutch. In spite of the uncertainty of the wind, the mills proved a very effective power machine for those days, since a well-placed one generally ran eight out of 24 hours.

They served a useful purpose even when not in operation. During the reign of Queen Anne, English windmill arms, when halted in a diagonal position to form a St. Andrew's cross, meant "Out to Lunch." When the miller returned from lunch, he merely shifted the sweeps into a straight St. George's cross for a few moments to announce that he was again open for business. The sweeps indicated a death in the family when kept motionless for several days in the St. George position.

Steam Engine Caused Decline of Windmills

During the days of smuggling in the 18th century, the English windmill sometimes also worked outside the law. A hasty jerk of the sails into a St. George's cross meant the customs men were about and contraband goods should be quickly hidden.

The use of windmills declined when the steam engine was invented. In the Netherlands, famous for its windmills, only about 1,300 now remain of the once-great array of 8,000. They have become so scarce in England that the Society for the Protection of Ancient Buildings has undertaken to preserve them as national landmarks.

New life for the idea—if not the body—of the windmill came from

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bare at points where early in this century glacier ice stood hundreds of feet thick. Even ice-capped Greenland shows some signs of the increasing warmth and decreasing snowfall.

NOTE: Anchorage and the site of Lake George may be located on the Society's map of Canada, Alaska & Greenland.

For additional information, see "Alaska's Automatic Lake Drains Itself," in *The National Geographic Magazine* for June, 1951; "Alaska's Russian Frontier: Little Diomede," April, 1951; "Nomads of the Far North," October, 1949; and "Strategic Alaska Looks Ahead," September, 1942.

DON C. KNUDSEN FROM FREDERIC LEWIS

WHERE LAKE GEORGE'S FLOOD WATERS SWIRL GIGANTIC ICEBERGS PAST THE FURROWED FACE OF KNIK GLACIER, GEOLOGISTS EXAMINE GLACIAL ICE WHICH MAY BE THOUSANDS OF YEARS OLD

Bulletin No. 5, October 20, 1952

Beirut Called Heir of Tyre and Sidon

BEIRUT, capital of the Republic of Lebanon, is the seaport from which huge American-made diesel trucks now roll deep into Bible lands.

This smallest of all Near East countries occupies some 3,600 square miles of territory seemingly gouged out of Syria. The Mediterranean washes its western edge and Palestine hems it in on the south.

Although one of the world's youngest republics, Lebanon has a history stretching back at least 4,000 years. When all the region was Phoenicia, before Egypt, Persia, Greece, Rome, or Turkey dominated them, the dwellers in the narrow, fertile coastal plain and on the slopes of the wooded Lebanon Mountains grew fruit and grain, produced silk, and built from the hardwoods of their forests ships for the Mediterranean trade. Their occupations have changed little during the passing centuries, and Lebanon is still a land of traders and farmers.

Sidon Is Still a Sizable City

Situated on major trade routes, Beirut is a modern heir to the greatness of Tyre and Sidon. Sidon first rose to power. Then shifting sands silted its harbor; its population dwindled. Many of its people went a few miles down the coast to Tyre. That port had its period of fame, then it, too, declined as Carthage usurped its trade and glory.

Modern Lebanese regard Tyre and Sidon as musty relics of an almost forgotten past. Some say they died under the curse of the Prophets of Israel, called down upon them for their wickedness. Tyre still exists, and Sidon today has some 20,000 inhabitants. But Beirut, with more than 200,000 residents, hums with its inheritance of their trade. So to a lesser extent does Tripoli, 45 miles to the north along the coast.

Air-conditioned busses and 25-ton trucks roar over the Lebanon Mountains which tower 8,000 feet between Beirut and Damascus in Syria—the world's oldest inhabited city. Beyond Damascus the route crosses the desert to Baghdad, Iraq (Biblical Mesopotamia), and Tehran, in far Iran, once storied Persia.

Route to Tripoli Holds Second Place

Air line and railroad also serve this 55-mile route to Damascus. Before train and automobile, camels plodded along the trail once followed by the caravans of Alexander the Great, who captured Tyre in 332 B.C. The French, who ruled both Lebanon and Syria between World Wars, improved the railway and highway. An automobile trip through the beautiful scenery of the region now takes two hours or less.

Pathway of trade out of Beirut next in importance is the truck route to Tripoli, and on to Homs, Hama, and Aleppo, inland cities in a farming area of north Syria. Since the partition of Palestine, there has been little or no traffic along the coast south to Cairo.

Before Beirut could be made into a passable port, its artificial harbor had to be enlarged. Pine trees were planted to anchor the red sands that threatened to engulf it. A water supply was obtained from the Nahr el Kelb, or Dog River.

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the United States. In 1941 the largest windmill in the world—110 feet high with blades circling 174 feet—was set up on "Grandma's Knob" near Rutland, Vermont. For four years it proved its ability to supplement water power in the creation of electricity.

Encouraged by this experiment, European experts joined in a research program to speed work of harnessing wind for electricity.

The most ambitious proposal, so far, has come from a German engineer who has blueprinted plans to build a number of gigantic wind towers, 1,000 feet high, to furnish cheap electricity for the industrial development of Schleswig-Holstein.

NOTE: The Orkney Islands, site of the new modern windmill, may be located on the Society's map of The British Isles.

EDWIN L. WISHERD

AN OLD-STYLE WINDMILL WAVES ANGULAR ARMS ABOVE BARBADOS CANE FIELDS

The mill harnesses the wind to drive cane-crushing machinery. Many sugar mills on this British West Indies island are now powered by electricity but a few of these old-fashioned ones remain on the job. The cone-shaped stacks of "bagasse," used for fuel and fertilizer, are waste from the sugar cane. Barbados, like the Netherlands, is noted for its windmills.

The majority of the Lebanese live by agriculture. Wheat ranks first among crops although not enough is produced to feed the Lebanese themselves. About 50 per cent must be imported from Syria. Fruit comes next in quantity but is first in value. Olives, grapes, citrus fruits, figs, apples, and bananas contribute most to the nation's wealth.

Lebanon has few industries. A silk mill at Beirut produces a moderate quantity. Factories at Beirut and Tripoli turn out cotton thread and fabric. Some woolen cloth is manufactured at Beirut from imported yarns. Leather goods, olive oil, soap, and cement add to the industrial output.

Education is widespread and there are more newspapers, magazines, and bookshops in Beirut than in any other city of the Arab states. Most publications are in Arabic, although a number appear in French, English, and Armenian. Beirut has two universities—the American University (illustration, below), and the French St. Joseph University.

United States industry has reason to be grateful to both the French and the Lebanese for making Beirut the trade center it is today. Nylons, fountain pens, typewriters, and automobiles—these and many other products of American factories pass through Beirut on their way to markets of the Near, Middle, and Far East.

NOTE: Lebanon is shown on the Society's maps of Bible Lands and the Cradle of Western Civilization, and Southwest Asia.

See also, "Syria and Lebanon Taste Freedom," in *The National Geographic Magazine* for December, 1946; "American Alma Maters in the Near East," August, 1945; and, in the GEOGRAPHIC SCHOOL BULLETINS, May 12, 1952, "National Geographic Bounds the Three Easts."

MAYNARD OWEN WILLIAMS

PINE, PALM, AND CYPRESS FRAME BEIRUT'S AMERICAN UNIVERSITY BUILDINGS

Rising above the blue Mediterranean, amid almost tropical luxuriance, the university offers an education to nearly 1,000 students from some 20 nations. Founded nearly a century ago as a Presbyterian mission college, the university now includes colleges of medicine, agriculture, and technical subjects. Across the bay rise the Lebanon Mountains, famed since Biblical times for their cedars.